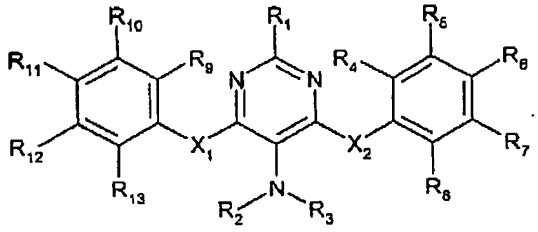
LISTING OF CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application.

Claim 1. (Withdrawn) A method of controlling ectoparasites on a mammal comprising administering to said mammal a compound of formula I



I

wherein

R_1 is hydrogen, halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl, NR_2R_3, unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl and NR_2R_3;

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, formyl, C_1-C_6-alkylcarbonyl, halo-C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, halo-C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylaminocarbonyl, di-C_1-C_6-alkylaminocarbonyl or unsubstituted or one- to five-fold substituted benzyl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl and halo-C_2-C_6-alkenylsulfonyl;

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, cyano, nitro, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl, C_1-C_6-alkylamino, di-C_1-C_6-alkylamino, C_1-C_6-alkylsulfonylamino, halo-C_1-C_6-alkylsulfonylamino, C_1-C_6-alkylcarbonyl, halo-C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylaminocarbonyl, di-C_1-C_6-alkylaminocarbonyl, or unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-

alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl and NR_2R_3;

X_1 and X_2, independently of one another, are $C(R_{14})(R_{15})$, NR_{14}, O, S, SO or SO_2; and

R_{14} and R_{15}, independently of one another, signify hydrogen, C_1-C_6-alkyl, formyl, C_1-C_6-alkylcarbonyl or halo-C_1-C_6-alkylcarbonyl.

Claim 2. (Withdrawn) The method of claim 1, wherein

R_1 is hydrogen, halogen, NO_2, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_1-C_6-alkylthio or halo-C_1-C_6-alkylthio.

Claim 3. (Withdrawn) The method of claim 1, wherein

R_1 is hydrogen, halogen, NO_2, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy or halo-C_1-C_6-alkoxy.

Claim 4. (Withdrawn) The method of claim 1, wherein

R_1 is hydrogen, C_1-C_6-alkyl or C_1-C_6-alkoxy.

Claim 5. (Withdrawn) The method of claim 1, wherein

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_6-alkyl, formyl, C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylaminocarbonyl, di-C_1-C_6-alkylaminocarbonyl or unsubstituted or one- to five-fold substituted benzyl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl and halo-C_2-C_6-alkenylsulfonyl.

Claim 6. (Withdrawn) The method of claim 1, wherein

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_4-alkyl, formyl, C_1-C_4-alkylcarbonyl or benzyl.

Claim 7. (Withdrawn) The method of claim 1, wherein

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_2-alkyl, benzyl or formyl.

Claim 8. (Withdrawn) The method of claim 1, wherein

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, cyano, nitro, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_3-C_6-cycloalkyl, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio or unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl and NR_2R_3.

Claim 9. (Withdrawn) The method of claim 1, wherein

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro, C_1-C_4-alkyl, halo-C_1-C_4-alkyl, C_1-C_4-alkoxy or halo-C_1-C_4-alkoxy.

Claim 10. (Withdrawn) The method of claim 1, wherein

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro, C_1-C_2-alkyl or halo-C_1-C_2-alkyl.

Claim 11. (Withdrawn) The method of-claim 1, wherein

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro or CF_3.

Claim 12. (Withdrawn) The method of claim 1, wherein

X_1 and X_2, independently of one another, are NR_{14}, O or S.

Claim 13. (Withdrawn) The method of claim 1, wherein

X_1 and X_2, independently of one another, are NH, O or S.

Claim 14. (Withdrawn) The method of claim 1, wherein

X_1 and X_2 are O.

Claim 15. (Withdrawn) The method of claim 1, wherein

R_{14} and R_{15}, independently of one another, signify hydrogen, C_1-C_4-alkyl, formyl, C_1-C_4-alkylcarbonyl.

Claim 16. (Withdrawn) The method of claim 1, wherein

R_{14} and R_{15}, independently of one another, signify hydrogen or C_1-C_4-alkyl.

Claim 17. (Withdrawn) The method of claim 1, wherein

R_{14} and R_{15} signify hydrogen.

Claim 18. (Withdrawn) The method of

claim 1, wherein

R_1 is hydrogen, halogen, NO_2, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_1-C_6-alkylthio or halo-C_1-C_6-alkylthio;

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_6-alkyl, formyl, C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylaminocarbonyl, di-C_1-C_6-alkylaminocarbonyl or benzyl;

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, cyano, nitro, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_3-C_6-cycloalkyl, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio or unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl and NR_2R_3;

X_1 and X_2, independently of one another, are NR_{14}, O or S; and

R_{14} signifies hydrogen, C_1-C_4-alkyl, formyl, C_1-C_4-alkylcarbonyl.

Claim 19. (Withdrawn) The method of claim 1, wherein

R_1 is hydrogen, halogen, NO_2, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy or halo-C_1-C_6-alkoxy;

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_4-alkyl, formyl, C_1-C_4-alkylcarbonyl or benzyl;

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro, C_1-C_4-alkyl, halo-C_1-C_4-alkyl, C_1-C_4-alkoxy or halo-C_1-C_4-alkoxy; and

X_1 and X_2, independently of one another, are NH, O or S.

Claim 20. (Withdrawn) The method of claim 1, wherein

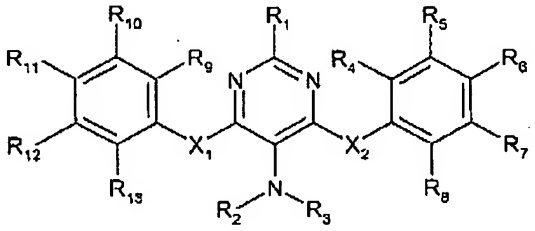
R_1 is hydrogen, C_1-C_6-alkyl or C_1-C_6-alkoxy;

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_2-alkyl, formyl or benzyl;

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro, C_1-C_2-alkyl or halo-C_1-C_2-alkyl; and
X_1 and X_2 are O.

Claim 21. (Withdrawn) The method of claim 1, wherein
R_1 is hydrogen, C_1-C_6-alkyl or C_1-C_6-alkoxy;
R_2 and R_3, independently of one another, signify hydrogen, C_1-C_2-alkyl, formyl or benzyl;
R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro or CF_3; and
X_1 and X_2 are O.

Claim 22. (Previously presented) An ectoparasiticidal composition comprising a compound of formula I



I

wherein
R_1 is hydrogen, halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl, NR_2R_3, unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-

C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl and NR_2R_3;

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, formyl, C_1-C_6-alkylcarbonyl, halo-C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, halo-C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylaminocarbonyl, di-C_1-C_6-alkylaminocarbonyl or unsubstituted or one- to five-fold substituted benzyl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl and halo-C_2-C_6-alkenylsulfonyl;

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, cyano, nitro, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl, C_1-C_6-alkylamino, di-C_1-C_6-alkylamino, C_1-C_6-alkylsulfonylamino, halo-C_1-C_6-alkylsulfonylamino, C_1-C_6-alkylcarbonyl, halo-C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylaminocarbonyl, di-C_1-C_6-alkylaminocarbonyl, or unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH,

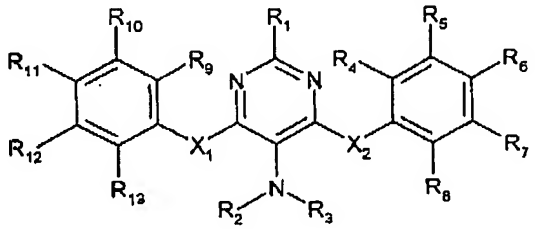
$COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl and NR_2R_3;
X_1 and X_2, independently of one another, are $C(R_{14})(R_{15})$, NR_{14}, O, S, SO or SO_2; and
R_{14} and R_{15}, independently of one another, signify hydrogen, C_1-C_6-alkyl, formyl, C_1-C_6-alkylcarbonyl or halo-C_1-C_6-alkylcarbonyl;
and at least one of a physiologically acceptable carrier or dispersant.

Claim 23. (Previously presented) The ectoparasiticidal composition according to claim 22 wherein said composition is in a pour-on or spot-on formulation.

Claim 24. (Withdrawn) A method of controlling ectoparasites comprising administering an effective amount of at least one compound of formula I according to claim 1 to the habitat of the parasites.

Claims 25-26. (Cancelled)

Claim 27. (Previously presented) An ectoparasiticidal composition comprising a compound of formula I



I

wherein R_1 is hydrogen, halogen, NO_2, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_1-C_6-alkylthio or halo-C_1-C_6-alkylthio;

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_6-alkyl, formyl, C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylaminocarbonyl, di-C_1-C_6-alkylaminocarbonyl or benzyl;

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, cyano, nitro, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_3-C_6-cycloalkyl, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio or unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl and NR_2R_3;

X_1 and X_2, independently of one another, are NR_{14}, O or S;

R_{14} signifies hydrogen, C_1-C_4-alkyl, formyl, C_1-C_4-alkylcarbonyl; and at least one of a physiologically acceptable carrier or dispersant.

Claim 28. (Previously presented) The composition of claim 27, wherein

R_1 is hydrogen, halogen, NO_2, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy or halo-C_1-C_6-alkoxy;

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_4-alkyl, formyl, C_1-C_4-alkylcarbonyl or benzyl;

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro, C_1-C_4-alkyl, halo-C_1-C_4-alkyl, C_1-C_4-alkoxy or halo-C_1-C_4-alkoxy; and

X_1 and X_2, independently of one another, are NH, O or S.

Claim 29. (Previously presented) The composition of claim 27, wherein

R_1 is hydrogen, C_1-C_6-alkyl or C_1-C_6-alkoxy;

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_2-alkyl, formyl or benzyl;

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro, C_1-C_2-alkyl or halo-C_1-C_2-alkyl; and

X_1 and X_2 are O.

Claim 30. (Previously presented) The composition of claim 27, wherein

R_1 is hydrogen, C_1-C_6-alkyl or C_1-C_6-alkoxy;

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_2-alkyl, formyl or benzyl;

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro or CF_3; and

X_1 and X_2 are O.